



Arboricultural Impact Assessment for: Lodge Refurbishment Works at Longleat Center Parcs

Inspected and prepared by

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Prepared for

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Report date

26th April 2026

Site address

Longleat Village Center Parcs
Longleat
Warminster
BA12 7PU

Report reference

LCP-LRW-AIA-26042026

Planning Reference

TBC

Executive summary

This Arboricultural Impact Assessment is intended to provide Wiltshire Council with arboricultural information in support of a planning application for the refurbishment of three lodge clusters at Longleat Center Parcs.

The information within is compliant with *BS5837: 2012 Trees in Relation to Design, Demolition and Construction – Recommendations* and contains details of the potential impacts of the proposals on the trees on the site.

The proposals are for internal renovations with minor external works comprising the extension of block paved cycle store areas, the extension of rear patios and the upgrading of existing barbeque stands to the rear of the lodges.

No tree removals or tree pruning works are required to facilitate the proposals.

Four of the proposed paved cycle store extensions and two of the proposed rear patio extensions are within the root protection areas (**RPAs**) of retained trees, to prevent an adverse impact on adjacent trees the extensions within RPAs will be NO DIG constructions using a cellular confinement ground protection system as a subbase, surfaced with a porous wearing course.

Existing barbeque stands to the rear of the lodges will be removed and replaced with new slightly larger stands, the majority of the barbeque stands are outside of the RPAs of retained trees however, as a precaution, excavations for the required 75mm deep concrete foundation base will be hand dug. If roots are encountered the position of the stand will be moved to avoid root conflict, if root conflict cannot be avoided then the stand will be constructed directly onto the existing patio with no excavations for a base. No roots will be adversely impacted by the construction of new barbeque stands.

Temporary ground protection boards will be used to facilitate construction access around the sides of the lodge clusters through RPAs to extend rear patios and to upgrade barbeque stands.

Temporary barriers will be used to demarcate root protection areas and to exclude construction activity from unprotected RPAs that are vulnerable to compaction damage.

The site does not lie within the limits of a Conservation Area and there are no trees on the site that are the subject of a Tree Preservation Order (**TPO**).

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B	Tree Protection Plan (TPP)
C	Tree survey schedule and key
D	Tree survey methodology

1.0 Instructions

- 1.1 Assured Trees are instructed to carry out a tree survey at Longleat Center Parcs and to prepare an arboricultural report in support of a planning application to Wiltshire Council for the refurbishment of three lodge clusters on the site, which involves minor external works that have the potential to impact trees.
- 1.2 This report has been prepared by a qualified arboriculturalist in accordance with *BS5837: 2012 Trees in Relation to Design, Demolition and Construction – Recommendations* (**BS5837: 2012** hereafter) and contains the components listed in Table 1. The aim of this report is to identify and assess potential impacts on trees on the site as a result of proposed development works, identify any tree works or tree removals that are necessary to facilitate the proposals and outline suitable mitigation measures for any identified adverse impacts on retained trees.

Component	Description
Tree survey and tree work schedule	Including all trees that could potentially be impacted by the proposals and containing details of trees to be removed and any proposed tree works.
Arboricultural Impact Assessment (AIA)	Containing details of the potential impacts of development proposals on trees on the site.
Arboricultural Method Statement (AMS)	Preliminary report presented at Appendix A as a standalone document containing a clear specification for protective measures for retained trees throughout the development process.
Tree Protection Plan (TPP)	Illustrating the extent and location of required tree protection measures.

Table 1: Report components

- 1.3 This report has been informed by the following documents:

Document	Reference	Supplied by
Existing site plans for clusters C, D and E	2479-LF-P8-(C)001 2479-LF-P8-(D)001 2479-LF-P8-(E)001	Jackson Design Associates
Proposed site plans for clusters C, D and E	2479-LF-P8-(C)002 2479-LF-P8-(D)002 2479-LF-P8-(E)002	Jackson Design Associates

Table 2: Documents provided

2.0 Introduction

- 2.1 The application site is comprised of three lodge clusters (C, D and E), each cluster contains two separate buildings and each building contains five guest units. The lodge clusters are located on the south side of the main drive to the west of the Subtropical Swimming Paradise (figure 1). The proposals are for internal renovations with minor external works comprising the extension of block paved cycle store areas, the extension of rear patios and the upgrading of existing barbeque stands to the rear of the lodges.

Site location:

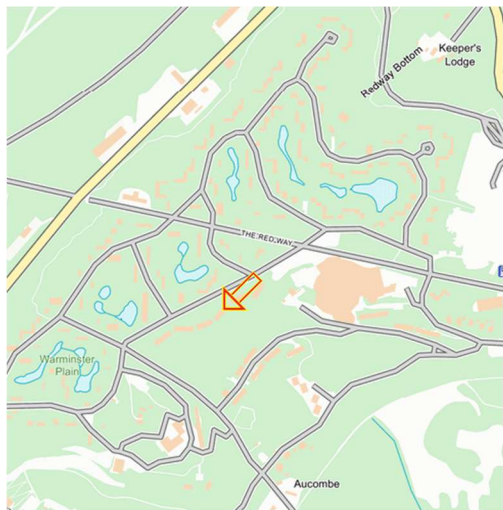


Figure 1: Site Location indicated by orange arrow
<https://www.streetmap.co.uk/>



Figure 2: Red line indicates approximate limits of site survey
www.google.com

3.0 Report limitations

- 3.1 The tree survey was carried out from ground level, observations were made in the context of planning and development in accordance with BS5837:2012 and specifically relate to the conditions found at the time of the survey. The survey does not constitute a detailed hazard assessment, no decay detection equipment has been used in assessing trunk condition and no samples of any kind have been taken for analysis.

4.0 Trees included in the survey

- 4.1 Forty five trees and two tree groups were identified during the site survey and have been awarded category ratings in accordance with the BS5837:2012 cascade chart for tree quality assessment whereby a rating of **A**, **B**, **C** or **U** is allocated based on the condition of a tree or group of trees in its/their current surroundings, with **A** representing the higher quality trees, **B** the moderate quality, **C** the lower quality and **U** the trees that should be removed for arboricultural reasons. A full account of the tree survey methodology including the categorisation criteria for surveyed trees is presented at appendix C.

BS5837:2012 Category rating				
	A	B	C	U
Trees	0	5	40	0
Groups	0	0	2	0

Table 3: Tree categorisation quantities

- 4.2 The survey primarily focused on trees to the front and sides of the lodge clusters as these are the trees that could potentially be impacted by the extension of the paved cycle stores (image 1), the extension of rear patios and by construction access to rear barbeque areas.
- 4.3 Generally tree cover to the rear of the lodges is light with a significant separation distance to the nearest large tree, the majority of trees recorded are small amenity trees planted on bunds between the lodges to provide privacy (image 2).
- 4.4 To the west there are several large, mature Douglas fir trees that have RPAs extending into the existing cycle store and patio areas. As there are hard standing paths to the front of all lodge clusters that will be used to provide access to the front of the lodges, only trees that have RPAs extending into soft landscape proposed for works have been recorded in the survey.



Image 1: The cycle store proposed for extension adjacent trees 01-G04 to the front of lodge 804.



Image 2: Typical example of small trees on bunds between lodges.

5.0 Root Protection Areas (RPAs)

- 5.1 Below ground constraints or Root Protection Areas (RPAs) for all trees on site have been calculated in accordance with BS5837:2012. The RPA is a layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability and where the protection of the roots and soil structure must be treated as a priority. The RPA does not represent the entire rooting area of a tree.

- 5.2 The default position should be that structures are located outside the RPA's of retained trees however, where there is an overriding justification for construction within the RPA, technical solutions must be used that prevent damage to the tree. The RPAs have been plotted onto the Tree Constraints Plan as a circle centred on the base of each tree stem with a radius of 12 times the trees stem diameter measured at 1.5 metres above ground level.
- 5.3 BS5837:2012 requires that where pre-existing site conditions or other factors indicate that rooting has occurred asymmetrically the RPA should be modified to produce a polygon of an equivalent area. Table 4 contains details of all trees on site for which the RPA has been modified.

Tree No.	Reason for modification
T41	A mature Douglas fir to the front lodge 837 with a timber retaining wall within the RPA to the south that will have acted as a barrier to root growth, the wall runs down to ground level to the north-east and roots are likely to have grown around the end of the wall and back to the west.

Table 4: RPA modifications

6.0 Statutory constraints

- 6.1 A review of Wiltshire Council on-line resources¹ reveals that the site does not lie within the limits of a Conservation Area and that there are no trees on the site that are the subject of a Tree Preservation Order (**TPO**). It is not currently necessary to obtain consent from Wiltshire Council to carry out tree works on the site, however planning policy requires tree works that are in the interest of development to be included within arboricultural information supporting a planning application regardless of statutory tree protection.

7.0 Soils

- 7.1 Tree growth can cause differential movement in structures on shrinkable clay soils as moisture is removed from the soil below foundation depth during the growing season. Soil information obtained using the British Geological Survey Data² indicates an underlying geology of *Cann Sand Member – Sandstone* and does not indicate there is an underlying clay soil with a high potential for volume change as a result of moisture abstraction by tree roots.

¹ <https://wiltscouncil.maps.arcgis.com/>

² https://geologyviewer.bgs.ac.uk/?_ga=2.152583345.92563876.1660213156-1216554341.1660213156

8.0 Planning policy

8.1 National Planning Policy Framework (NPPF 12 December 2024)³ states that:

Development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists.

Planning policies and decisions should ensure that new streets are tree-lined, that opportunities are taken to incorporate trees elsewhere in developments (such as parks and community orchards), that appropriate measures are in place to secure the long-term maintenance of newly-planted trees, and that existing trees are retained wherever possible.

8.2 Local planning policy includes Wiltshire Core Strategy - adopted 2015⁴:

Core Policy 52- Green infrastructure

Development shall make provision for the retention and enhancement of Wiltshire's green infrastructure network and shall ensure that suitable links to the network are provided and maintained. Where development is permitted developers will be required to:

- i. retain and enhance existing on site green infrastructure*
- ii. make provision for accessible open spaces in accordance with the requirements of the adopted Wiltshire Open Space Standards*
- iii. put measures in place to ensure appropriate long-term management of any green infrastructure directly related to the development*
- iv. provide appropriate contributions towards the delivery of the Wiltshire Green Infrastructure Strategy*
- v. identify and provide opportunities to enhance and improve linkages between the natural and historic landscapes of Wiltshire.*

9.0 Tree removals and arboricultural works

9.1 No tree removals or tree pruning works are necessary to facilitate the proposals.

10.0 General impacts of development on trees

10.1 The most common below ground impact in a development scenario arises from the compaction of soil within the rooting area of a tree. Soil compaction prevents water ingress, creates poor drainage and reduces the availability of oxygen to roots resulting in impaired root growth or even root death. Soil compaction can arise through vehicle movements or through the storage of heavy materials on vulnerable ground such as grass.

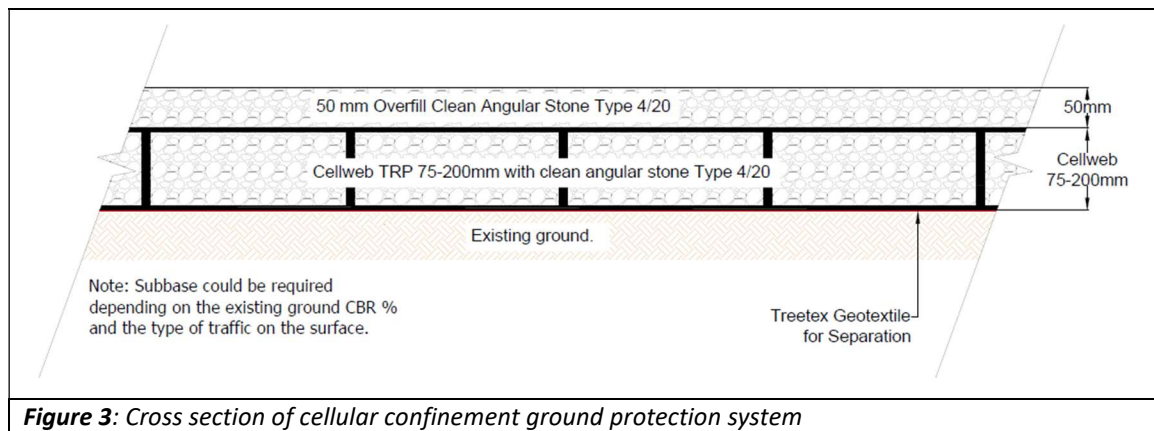
³ <https://www.gov.uk/government/publications/national-planning-policy-framework--2>

⁴ <https://www.wiltshire.gov.uk/media/372/Wiltshire-Core-Strategy-adopted-2015/pdf/Wcs.pdf?m=637099399373530000>

- 10.2 Further below ground impacts arise through the severance of roots to construct foundations, install services or alter ground levels. To avoid compaction and/or root severance, construction activity must be excluded from the RPA of retained trees using robust physical barriers. If construction access is required within the RPA, barriers need to be set back and ground protection used to prevent soil compaction. Existing hard surfacing such as tarmac can be used as ground protection.

11.0 Site specific potential impacts

- 11.1 **Works within RPAs:** The proposed external works are relatively low impact in the context of development and require the extension of nine block paved cycle stores to the front of the lodge clusters and eight rear patios. Four of the cycle store extensions and two of the rear patio extensions are within the RPAs of retained trees so there is potential that works could impact underlying roots if excavations are required into existing ground level or if the works will cause ground compaction in areas of soft landscape within RPAs. To prevent ground compaction or root severance within RPAs the paved cycle store and patio extensions within RPAs must be a NO DIG construction using a Cellular Confinement Ground Protection System as a subbase (figure 3).



- 11.2 **Barbeque stands** to the rear of lodges are proposed for removal with new larger stands constructed in their place onto a 75mm concrete subbase. The majority of the stands are outside of RPAs however, as a precaution, excavations for the barbeque subbases must be carried out by hand digging. If roots are encountered the position of the base must be moved to avoid conflict with the roots, if necessary constructing the base directly onto the existing patio with no excavations for a base.
- 11.3 Materials from the removal of the existing barbeque stands and materials for constructing the new barbeque stands will be taken through the lodges where possible using existing hard standing footpaths and patios.

- 11.4 Construction access to the rear of the lodge clusters to construct rear patio extensions or to upgrade barbeque stands (where access through the lodges is not possible for any reason) could cause ground compaction within RPAs in areas of soft landscape. To prevent compaction damage, temporary ground protection boards must be laid within exposed RPAs to the sides of the lodge clusters. The boards must be capable of supporting any traffic entering or using the site without being distorted or causing compaction of underlying soil. For pedestrian-operated plant up to a gross weight of 2 tonnes, proprietary, inter-linked ground protection boards placed on top of a compression-resistant layer (e.g. 150 mm depth of woodchip), laid onto a geotextile membrane are appropriate (figure 4).



Figure 4: Example of proprietary, inter-linked ground protection boards used as tree root protection.

- 11.5 **Barriers:** There is potential that any plant or equipment used during the extension of paved cycle stores, extension of rear patios or the upgrade of barbeque stands could cause ground compaction in areas of soft landscape within the RPAs or physically damage the above ground parts of retained trees. To prevent tree damage temporary barriers must be used to exclude construction activity from RPAs during the works, the barriers must be appropriate to the degree and proximity of work taking place around retained trees and must be maintained to ensure they remain rigid and complete. Due to the low intensity of the proposed construction activity it is considered that conventional weldmesh barriers on rubber feet will be both impractical and unnecessary, instead barriers must consist of high visibility plastic mesh fencing secured with road-pins (figure 5).

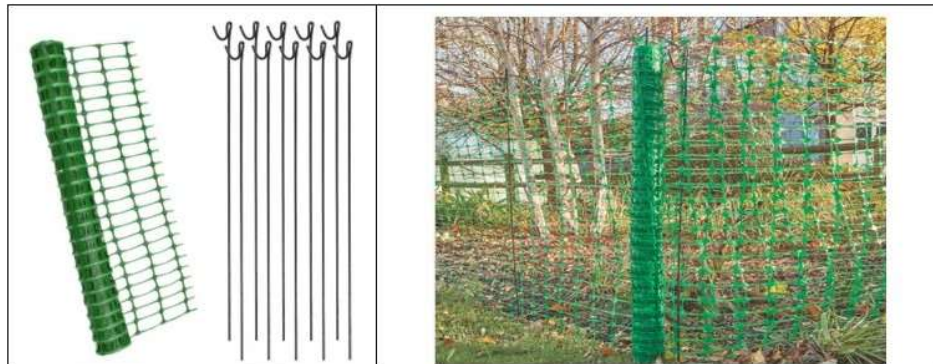
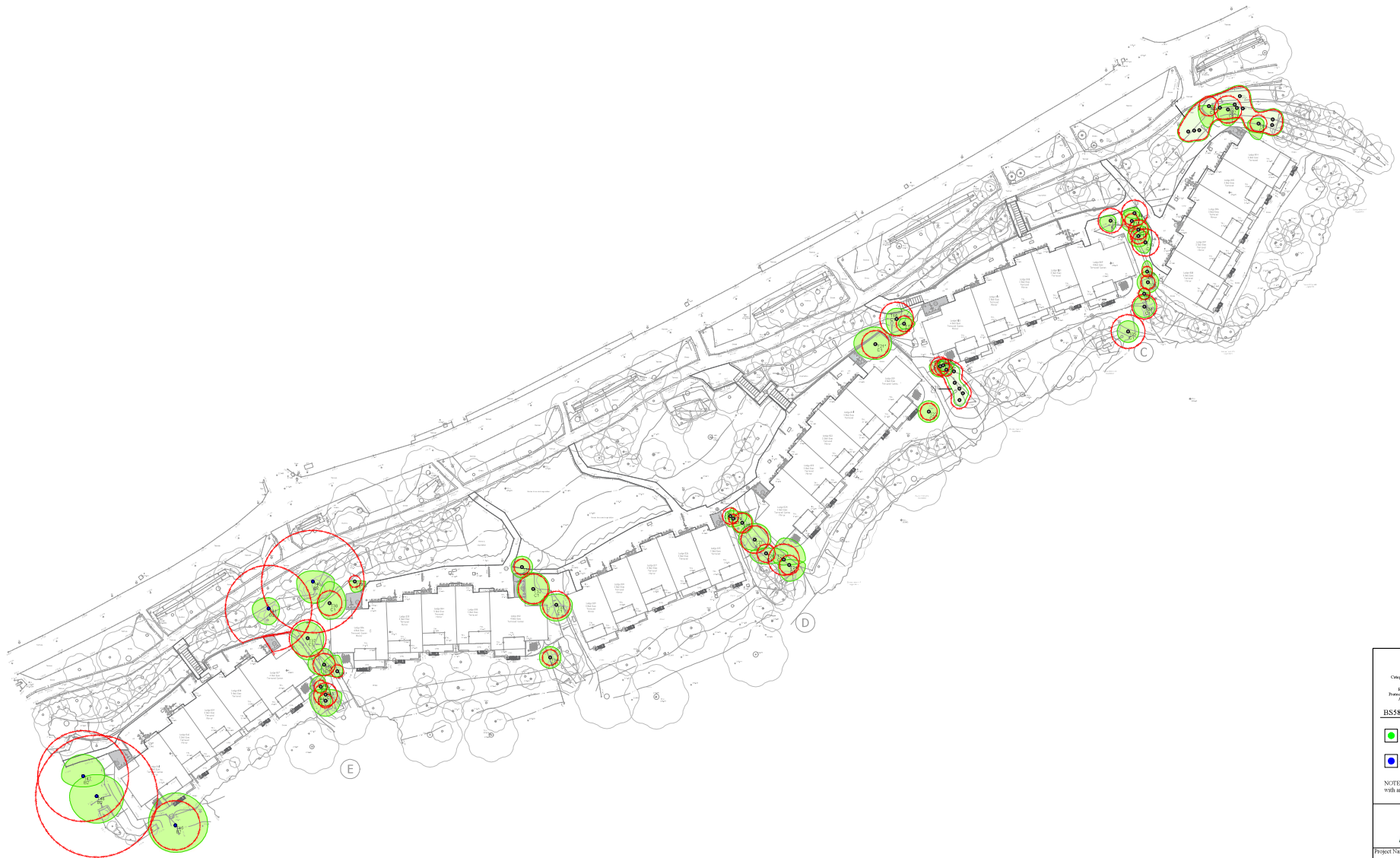


Figure 5: Plastic mesh fencing secured by road-pins.

- 11.6 **Buried services:** No new buried services are anticipated within the RPA of a retained tree to facilitate the works.

12.0 Conclusions

- 12.1 The proposals have been designed taking into account the constraints of all trees on the site, no tree removals or tree pruning works are required. The potential impacts of the low intensity external works on retained trees have been identified and impact mitigation measures have been proposed.
- 12.2 Retained trees can be protected during construction by a combination of temporary physical barriers erected to create construction exclusion zones, permanent ground protection used to extend paved cycle stores and rear patios within RPAs, hand digging excavations for barbeque subbases avoiding conflict with roots and temporary ground protection boards used to facilitate access through RPAs. Tree protection and impact mitigation works will need to be carried out in strict accordance with the provided arboricultural method statement.



Symbol Guide

Category: Crown Spread
 Base: Tree Diameter
 Area: Tree Category

BS5837:2012 - Tree Category

Category A: Trees of High Value	Category F: Trees of Low Value
Category B: Trees of Medium Value	Category G: Trees of Very Low Value

NOTE: Tree group numbers marked with an * have approximate locations.

ASSURED TREES

Project Name:
Longleaf Lodge Refurbishment

Drawing Title:
Arboreal Impact Assessment

Drawing Number:
201110-41-AIA-NB

Client:
-

Date:
April 2026

Scale:
1:250 @ A0



Appendix A: Arboricultural Method Statement (AMS)





Arboricultural Method Statement for: Lodge Refurbishment Works at Longleat Center Parcs

Inspected and prepared by

Stuart Roberts
DipArb(RFS), MICFor, RCArbor A

Prepared for

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One Edison Rise
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N/a	Contents.....	01
1.0	Introduction.....	02
2.0	Arboricultural works.....	02
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6.0	Access for construction works.....	05
7.0	Supervision and monitoring.....	05
8.0	Contingency plans.....	05

1.0 Introduction

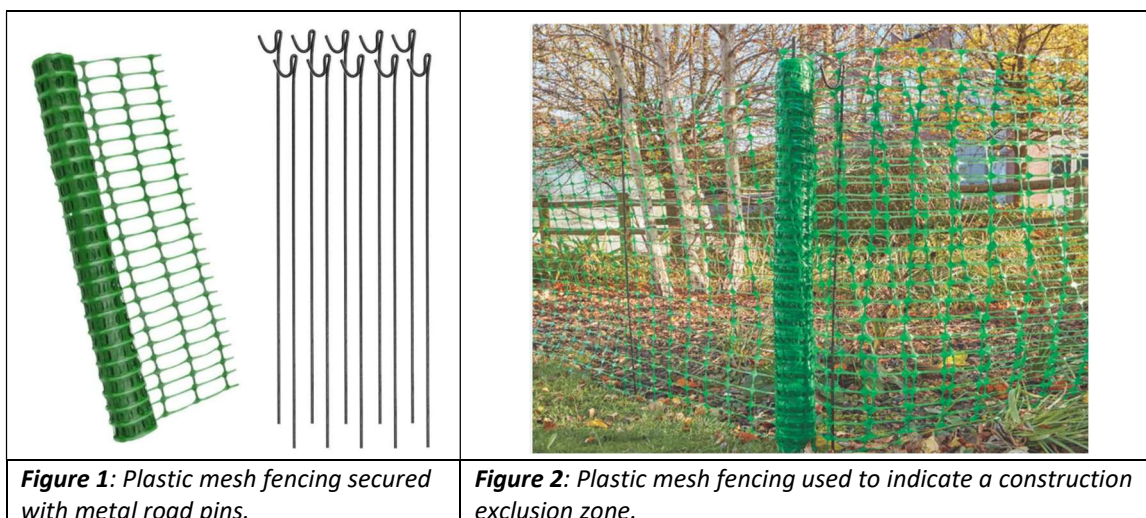
- 1.1 This preliminary Arboricultural Method Statement (**AMS**) provides details and specifications for all tree protection measures and arboricultural related operations necessary during lodge refurbishment works at Longleat Center Parcs. This AMS has been informed by Assured Trees Arboricultural Impact Assessment *ref: LCP-LRW-AIA-26042026*.
- 1.2 Copies of this AMS will be kept on site and the site manager will communicate the content to all staff and contractors with duties that involve working near trees or have the potential to impact retained trees.
- 1.3 The lodge refurbishment works are primarily internal but minor external works are proposed to upgrade barbeque stands to the rear of the lodges and to extend nine block paved cycle stores and eight rear patios, several of which are within the root protection area (**RPA**) of a retained tree.

2.0 Arboricultural works

- 2.1 No tree removals or tree pruning works will be undertaken to facilitate the proposals.

3.0 Tree protection

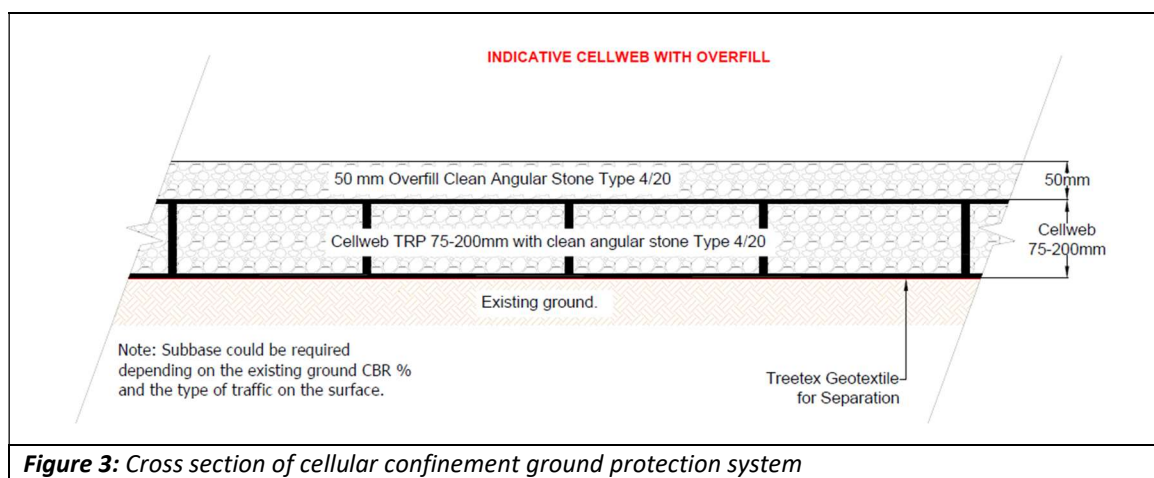
- 3.1 **Barriers:** *Before the commencement of any construction works on site*, temporary protective barriers will be installed in the positions indicated on the Tree Protection Plan. Due to the low level of construction intensity and the restricted space between the lodges and adjacent bunds, the minimum specification for the barriers will consist of light-weight plastic mesh fencing secured by steel road pins (figures 1 and 2). A more substantial form of barrier may be used if site barrier fencing is installed around the lodges as site hoarding which can serve a dual purpose as tree protection and site hoarding.



- 3.2 The protective barriers will create a Construction Exclusion Zone (CEZ) in order to prevent construction activity of any kind, including the storage of materials, within the unprotected RPA of retained trees. The barriers will remain in place until the completion of all lodge refurbishment works unless otherwise specified within this AMS. If site constraints require the alteration of the barriers then the project arboriculturalist will first be consulted who will take the necessary steps to obtain appropriate consent from Wiltshire Council.

4.0 Works within Root Protection Areas (RPAs)

- 4.1 **Cycle store/Patio extensions:** The four cycle store extensions and two patio extensions within the RPAs of retained trees, as indicated on the TPP, will be a NO DIG construction using a 75mm deep cellular confinement ground protection system¹ as a subbase. The system will be laid in strict accordance with the manufacturer's instructions and with *Arboricultural Guidance Note 12 The use of cellular confinement systems near trees: A guide to good practice*² and will ultimately be surfaced with a porous wearing course.
- 4.2 The system will be laid out by hand, no plant, heavy equipment or machinery will be used laying out the system. The Geotextile cells will then be filled with clean angular stone *Type 4/20* (figure 3). Machinery used to fill the cells will work from adjacent hard standing and never on the unprotected ground within the RPA.



¹ <http://www.geosyn.co.uk/product/cellweb-tree-root-protection>

² <https://www.trees.org.uk/News-Blog/Latest-News/New-guide-to-use-of-cellular-confinement-systems-n>

- 4.3 Access routes to the rear of the lodge clusters to construct patio extensions will encroach on the RPAs of retained trees and will be facilitated through the use of temporary ground protection laid in the positions indicated on the tree protection plan. The ground protection will consist of proprietary, inter-linked ground protection boards³ placed on top of a compression-resistant layer (e.g. 150mm layer of woodchip), laid onto a geotextile membrane (figure 4), in accordance with BS5837:2012 6.2.3.3 a).



Figure 4: Example of proprietary, inter-linked ground protection boards used as tree root protection.

- 4.4 **Barbeque stands:** The removal of the existing stands will take place using hand tools, materials associated with the removal of existing stands and the construction of the new stands will be taken through the lodges to avoid any need to access the soft landscape to the rear of the lodges. If for any reason access through the lodge is not possible, materials will be delivered/removed from the site of the stands in nothing larger than a tracked wheelbarrow, using the ground protection boards around the sides of the lodges.
- 4.5 The new barbeque stands will be constructed onto a 75mm concrete subbase, the 75mm excavations will be hand dug and if roots are encountered the position of the base will be moved to avoid conflict with the roots, if necessary constructing the base directly onto the existing patio with no excavations for a base. No roots will be adversely impacted by the construction of new barbeque stands.
- 4.6 **Services:** Buried services are not planned within the RPA of a retained tree. If services are required to run within the RPA of a retained tree for unforeseen reasons, they will be installed in accordance with the National Joint Utilities Group (NJUG) Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees - Issue 2: 16th November 2007⁴.

³ <https://www.ground-guards.co.uk/sectors/tree-root-protection/>

⁴ <http://streetworks.org.uk/wp-content/uploads/V4-Trees-Issue-2-16-11-2007.pdf>

5.0 Additional precautions outside of the construction exclusion zone

- 5.1 Fires will not be lit on site, no equipment, machinery, structure, notice boards, telephone cables or other services will be attached to or supported by a retained tree.
- 5.2 Cement and any materials or chemicals whose accidental spillage would cause damage to a tree must be stored well away from the outer edge of all RPAs and mixed in designated areas outside of RPAs using spill trays to ensure that accidental spillages will be contained and will not contaminate RPAs.
- 5.3 Planning of site operations will take sufficient account of wide loads, tall loads and plant with booms, jibs and counterweights (including drilling rigs), in order that they can operate without coming into contact with retained trees. Such contact can result in serious damage to the trees and might make their safe retention impossible. Consequently, any transit or traverse of plant in proximity to trees will be conducted under the supervision of a banksman, to ensure that adequate clearance from trees is maintained at all times.

6.0 Access for construction works

- 6.1 Construction traffic will enter the site via existing hard standing routes to the front of the lodges, if access is required to the rear of the lodges it will be facilitated as detailed in 4.3 above, construction traffic will not access the unprotected RPA of a retained tree at any time. Construction compounds, material storage areas, welfare facilities and contractor car parking will be located outside of the unprotected RPA of retained trees.

7.0 Supervision and monitoring

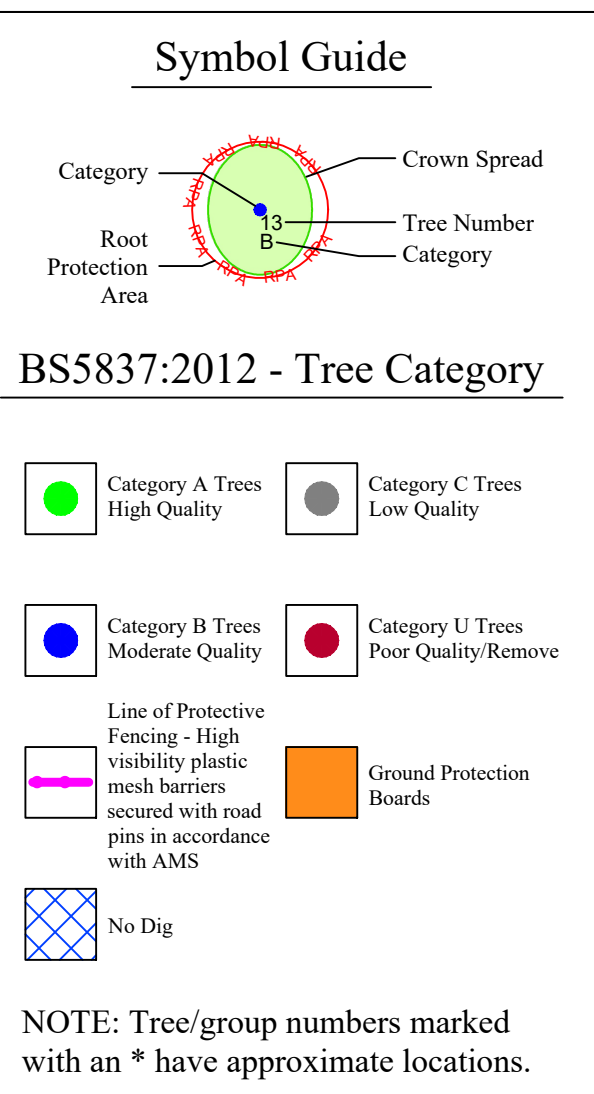
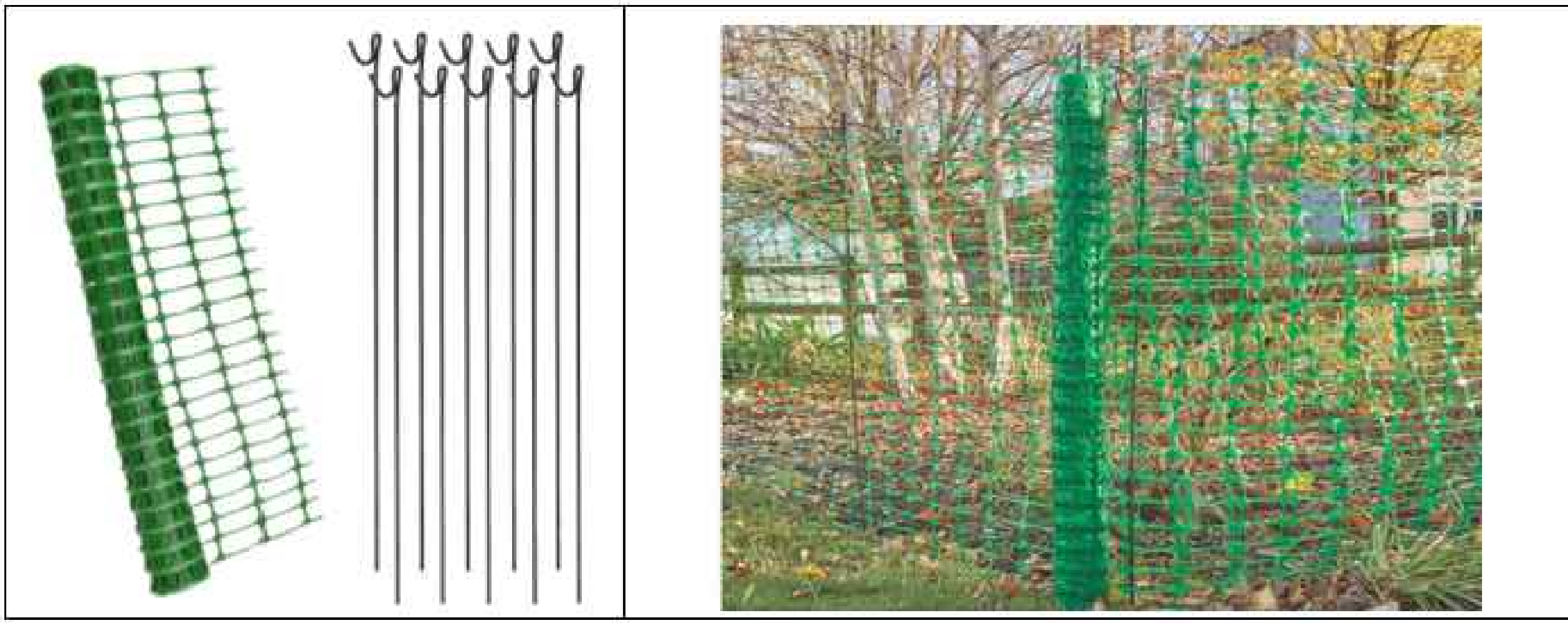
- 7.1 The Center Parcs Ground Services Department will be responsible for the monitoring of all tree protection measures and compliance with this Arboricultural Method Statement with input from Assured Trees as required. A pre-commencement site meeting will be held between a minimum of the Center Parcs Ground Services Manager and site foreman to fully communicate the measures detailed within the AMS.

8.0 Contingency plans

- 8.1 The occurrence of any unforeseen incidents that may adversely impact retained trees will be reported to the Center Parcs Ground Services Department as soon as practicable following the incident. The Center Parcs Ground Services Department will then advise on the appropriate course of action, with consultation from Assured Trees if necessary, and will produce and maintain a record of any such incidents including any subsequent measures taken.

Appendix B: Tree Protection Plan





Project Name: Longleat Lodge Refurbishment

Drawing Title:

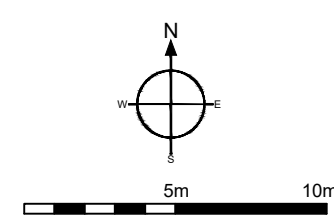
Tree Protection Plan

Drawing Number:
260123-LL-TPP-Rev A-NB

ent:

April 2026

1:250 @ A0



Appendix C: Tree Survey Schedule



Tree Survey Schedule															 ASSURED TREES
Client: Center Parcs															
Location: Longleat Village															
Date of survey: 1 st April 2026															

Tree Number	Single (S) or Group (G)	Tree Name (species)	Height (m)	Calculated Stem Diameter (mm)	Number of Stems	Crown Clearance (m)	Height & direction of 1 st branch	Crown spread				Age Class	Physiological Condition	Structural Condition	Condition Notes	Recommendations	Estimated Remaining Life Contribution	BS Category	Root Protection Area (Radius, m)
								North(m)	South(m)	East (m)	West (m)								
01	S	Goat willow	10	130	1	5	4-N	1	3	1	2	Y	G	F	Young willow on a bund, drawn up slender crown form.	None.	20+	C1	1.6
02	S	Lime	8	210	1	3	2-N	1	3	2	2	Y	G	F	Young lime growing on a bund, Twin stem from 2m from a narrow union with bark inclusion.	None.	40+	C1	2.5
03	S	Lime	5	150	1	0.5	1-S	0	4	1	2	Y	G	F	Young lime with a severe non-progressive stem lean and crown bias to the south.	None.	40+	C1	1.8
04	G	Mixed species	8	150	1	---	---	See tree constraints plan				Y	G	F	Group of young amenity trees planted on a bund to the north and west of lodge 804, containing birch, lime, fir, willow and field maple, all have drawn up slender crown forms.	None.	40+	C1	1.8
05	S	Fir	12	260	1	1	1-E	2	2	2	2	Y	G	G	Young fir in good condition.	None.	40+	C1	3.1
06	S	Fir	12	190	1	1	1-S	2	2	2	2	Y	G	G	Young fir in good condition.	None.	40+	C1	2.3
07	S	Birch	10	90	1	2	3-N	1	1	1	1	Y	G	F	Young birch with attenuated crown form.	None.	40+	C1	1.1
08	S	Field maple	9	110	5	0	0-S	2	2	2	2	Y	G	P	Young maple on a bund, stem lean to the west at ground level, multi-stem with prolific squirrel damage.	None.	20+	C1	1.3
09	S	Birch	8	80	1	1	1-N	2	1	1	1	Y	G	F	Young birch with attenuated crown form.	None.	40+	C1	1.0
10	S	Birch	15	210	1	4	4-W	2	2	1	2	Y	G	F	Birch with a drawn up slender crown form.	None.	40+	C1	2.5
11	S	Fir	10	120	1	1	2-W	2	2	2	2	Y	G	F	Single stem fir with suppressed crown form.	None.	40+	C1	1.4
12	S	Goat willow	10	150	1	3	3-N	2	1	2	1	Y	G	F	Single stem goat willow with suppressed crown form.	None.	40+	C1	1.8
13	S	Fir	10	110	1	0	1-W	2	2	2	2	Y	G	F	Single stem fir with suppressed crown form.	None.	40+	C1	1.3
14	S	Birch	15	200	1	3	3-N	1	1	1	2	Y	G	F	Birch with a drawn up slender crown form.	None.	40+	C1	2.4
15	S	Birch	15	190	1	3	4-S	1	2	1	2	Y	G	F	Birch with a drawn up slender crown form.	None.	40+	C1	2.3
16	S	Cherry	12	260	1	2	2.5-E	2	3	3	2	Sm	G	F	Twin stem from 2m from narrow union with bark inclusion.	None.	40+	C1	3.1
17	S	Fir	9	120	1	1	1-E	1	1	2	1	Y	G	F	Single stem fir with drawn up slender crown form.	None.	40+	C1	1.4

Tree Number	Single (S) or Group (G)	Tree Name (species)	Height (m)	Calculated Stem Diameter (mm)	Number of Stems	Crown Clearance (m)	Height & direction of 1 st branch	Crown spread				Age Class	Physiological Condition	Structural Condition	Condition Notes	Recommendations	Estimated Remaining Life Contribution	BS Category	Root Protection Area (Radius, m)
								North(m)	South(m)	East (m)	West (m)								
18	S	Hazel	8	144	13	1	1-E	1	2	1	2	Y	G	F	Young hazel coppice on bund, north stems pruned to clear building.	None.	20+	C1	1.7
19	S	Birch	9	100	1	6	6-E	1	1	2	1	Y	G	F	Young single stem birch with drawn up slender crown form.	None.	40+	C1	1.2
20	S	Fir	8	100	1	3	3-E	1	1	1	1	Y	G	F	Young single stem fir on a bund, lower branches dead through shading.	None.	40+	C1	1.2
21	S	Cherry	16	210	1	3	3-E	3	3	3	4	Sm	G	G	Single stem cherry to the front of lodge 820, drawn up slender crown form.	None.	40+	C1	2.5
22	S	Fir	8	130	1	2.5	2.5-S	2	2	2	2	Y	G	G	Young single stem fir to the rear of lodge 120.	None.	40+	C1	1.6
23	G	Field maple and birch	8	130	1	---	---	See tree constraints plan				Y	G	F	Group of young field maple and birch planted on a bund between lodges 820 and 813, all with suppressed crown form due to close proximity planting.	None.	40+	C1	1.6
24	S	Goat willow	12	150	1	3	3-E	1	3	3	2	Y	G	F	Single stem willow with a crown bias south west.	None.	40+	C1	1.8
25	S	Goat willow	13	240	1	3	3-E	4	1	4	2	Sm	G	F	Single stem willow with a non-progressive stem lean north and a crown bias north east.	None.	40+	C1	2.9
26	S	Field maple	9	140	1	3	3-E	1	2	4	3	Y	G	F	Maple on a bund between lodges 824 and 825, significant crown bias east to west.	None.	40+	C1	1.7
27	S	Hazel	7	212	18	0	0-N	3	2	3	3	M	G	F	Hazel coppice on a bund between lodges 824 and 825, crown suppressed to south.	None.	20+	C1	2.5
28	S	Goat willow	7	150	1	3	3-W	2	2	2	2	Y	F	F	Single stem goat willow, wound from 0-1m to east, minor stem lean north.	None.	20+	C1	1.8
29	S	Goat willow	6	70	1	3	3-W	2	0	0	1	Y	F	F	Small single stem goat willow with drawn up slender crown form.	None.	40+	C1	0.8
30	S	Hazel	6	126	10	0	0-N	1	2	3	1	Sm	G	F	Coppice hazel, stems to the west have been pruned to provide clearance from building.	None.	20+	C1	1.5
31	S	Fir	9	120	1	3	3-N	2	2	2	2	Y	G	G	Young single stem fir in good condition.	None.	40+	C1	1.4
32	S	Fir	17	230	1	5	5-N	3	3	3	3	Sm	G	G	Single stem fir, exposed surface roots, tree guard cutting in at base.	Remove tree guard.	40+	C1	2.8

Tree Number	Single (S) or Group (G)	Tree Name (species)	Height (m)	Calculated Stem Diameter (mm)	Number of Stems	Crown Clearance (m)	Height & direction of 1 st branch	Crown spread				Age Class	Physiological Condition	Structural Condition	Condition Notes	Recommendations	Estimated Remaining Life Contribution	BS Category	Root Protection Area (Radius, m)
								North(m)	South(m)	East (m)	West (m)								
33	S	Goat willow	10	210	1	3	3-N	2	3	3	3	Sm	G	F	Twin stem from 2m from narrow union, foliage in contact with adjacent buildings.	None.	40+	C1	2.5
34	S	Rowan	5	120	1	2	2-S	2	2	2	2	Y	G	G	Small rowan, twin stem from 1.5m from narrow union.	None.	40+	C1	1.4
35	S	Birch	12	100	1	5	5-E	3	1	1	3	Y	G	F	Young single stem birch with drawn up slender crown form.	None.	40+	C1	1.2
36	S	Field maple	10	170	1	1	2-N	3	2	2	3	Y	G	G	Young single stem maple on a bund, foliage close to adjacent buildings.	None.	40+	C1	2.0
37	S	Goat willow	11	284	3	2	0.5-N	3	4	3	3	Sm	G	F	Triple stem from 0.5m from good unions.	None.	40+	C1	3.4
38	S	Goat willow	10	190	1	2	2-S	4	3	3	2	Sm	G	F	Willow to the front of lodge 836, triple stem from 2m from good unions.	None.	40+	C1	2.3
39	S	Birch	10	90	1	3	3-S	0	2	2	1	Y	G	F	Small single stem birch with drawn up slender crown form.	None.	40+	C1	1.1
40	S	Douglas fir	26	790	1	10	10-S	2	4	4	3	M	G	G	Large single stem Douglas fir to the front of lodge 836, dead wood in lower crown, good condition.	None.	40+	B2	9.5
41	S	Douglas fir	26	650	1	6	6-W	2	3	2	3	M	G	G	Large single stem Douglas fir to the front of lodge 837, rooting restricted to south by timber retaining wall.	None.	40+	B2	7.8
42	S	Field maple	6	100	1	2	2-N	2	1	1	2	Y	G	G	Small, young, single stem field maple on a bund.	None.	40+	C1	1.2
43	S	Birch	10	180	1	1	1-E	1	4	3	3	Y	G	F	Young birch growing on a bund with a suppressed crown form.	None.	40+	C1	2.2
44	S	Ash	7	110	1	4	4-S	3	1	1	1	Y	P	P	Young single stem ash, symptomatic of ash dieback disease with 25%-50% remaining crown (class 3).	None.	<10	C1	1.3
45	S	Sycamore	18	380	1	2	2.5-W	6	5	6	5	M	G	G	Twin stem from 3.5m from good union, crown overhangs lodge to north, minor dead wood, good condition,	None.	40+	B2	4.6
46	S	Douglas fir	30	940	1	12	12-S	4	5	5	5	M	G	G	Large Douglas fir with prolific ivy on trunk, crown suppressed to north, good condition.	None.	40+	B2	11.3
47	S	Douglas fir	30	700	1	15	15-E	4	2	4	4	M	G	G	Large single stem Douglas fir, crown suppressed to south, good condition.	None.	40+	B2	8.4

Table Heading	Definition
Tree Number	Tree numbers as they appear in the Tree Schedule and are marked on the Tree Protection Plan drawings.
Single or group	S for a single tree, G for a group of trees and H for a hedge
Species	The common name of the tree
Height (m)	In meters measured with a laser clinometer
Calculated stem diameter (mm)	Calculated diameter of the stem(s) measured in millimetres at 1.5 meters from ground level
Number of stems	Indicates the number of stems measured to inform the Root Protection Area
Crown clearance (m)	Height in metres of crown clearance above adjacent ground level
Crown spread (m)	The spread of the crown measured in metres, taken at the four cardinal points from the trunk
Age class	(Np) Newly planted, (Y) Young, (SM) Semi-Mature, (EM) Early mature, (M) Mature, (A) Ancient or (V) Veteran
Physiological condition	Good – tree has good health and vitality. Fair- tree has minor health and vitality problems. Poor- tree has low vitality and significant health problems. Dead- dead tree.
Structural condition	G-good P- poor F- Fair D-dead
Condition notes	Specific notes relating to the condition of the tree
Recommendations	Recommendations for tree surgery based on any physical defects found or for further investigation of defects that require a more detailed assessment
Estimated remaining contribution	In years <10, 10+, 20+ or 40+
RPA (Root Protection Area) Radius (m):	The radius of the area in square metres that will need to be protected during construction with a protective fence and/or load bearing surface
Category grading Category	Category A: Trees of high quality with an estimated remaining life expectancy of at least 40 years Category B: Trees of moderate quality with an estimated remaining life expectancy of at least 20 years Category C: Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter <150mm Category U: Trees in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years
TREE SURVEY SCHEDULE KEY	

Appendix D: Tree survey methodology

The tree survey

A baseline tree survey is carried out by a qualified arboriculturalist, from ground level, in accordance with the methodology set out in *BS5837:2012 Trees in relation to design, demolition and construction – Recommendations*.

The results of the tree survey are used to establish material constraints arising from existing trees and is intended to be used (along with any other relevant baseline data) to inform feasibility studies and design options. For this reason, the tree survey should be completed and made available to the design team independently of any specific proposals for the development of a site.

The tree survey will include all individual trees, tree groups, woodlands and hedges within influencing distance of the proposed development site. Trees will ordinarily be recorded as individuals but may be recorded as groups if there is no need to differentiate between the trees in the group.

The quality of each tree or group of trees is recorded by allocating it to one of four categories along with a sub-category in accordance with the *BS5837:2012* Cascade chart for tree quality assessment. A category rating of either A, B, C or U is allocated based on the condition of a tree or group of trees in its/their current surroundings. No consideration is given to any specific development proposal when allocating category ratings, category definitions are detailed below:

Category	Criteria
A	<i>Trees or groups which have high quality and value, are in good structural and physiological condition and are expected to have a useful life expectancy of at least another 40 years- indicated in green on the associated plans</i>
B	<i>Trees or groups which would be considered as category A trees but which are of lower value, poorer structural condition, or which are expected to have a useful life expectancy of a minimum of 20 years- indicated in blue on the associated plans</i>
C	<i>Trees or groups which are of low quality and value, trees currently in adequate condition to remain until new planting is established or are young trees with a stem diameter less than 150mm. Category C trees are expected to have a life expectancy of a minimum of 10 years- indicated in grey on the associated plans</i>
U	<i>Trees or groups in such a condition that any existing value would be lost within ten years and which should, in the current context, be removed for reasons of sound arboricultural management- indicated in red on associated plans</i>

BS5837:2012 Tree categorisation criteria

Sub categories are awarded in accordance with the following criteria:

Sub category	Inclusion criteria
1	<i>Trees with arboricultural value</i>
2	<i>Trees with landscape value</i>
3	<i>Trees with cultural or conservation (ecological) value</i>

BS5837:2012 Tree sub-category criteria

Data for all trees, groups and hedges within influencing distance of the proposed development site is recorded in a tree survey schedule in accordance with *BS5837: 2012*. Trees are not physically tagged (unless we are instructed to do so) but are assigned individual numbers that are used to identify the tree, tree group, woodland or hedgerow throughout the report, within the Tree Survey Schedule and on the associated plans. The following information is collected for each tree in the survey:

Tree or group number; Single or group category; Common name of species; Height in metres; Number of stems; Stem diameter; Clearance of crown from ground level in metres; Crown spread in cardinal directions; Age class; Physiological condition; Structural condition; Estimated remaining contribution in years; Preliminary management recommendations; Tree categorisation; Radius in metres of the **Root Protection Area (RPA)**.

All measurements are taken using a stem diameter measuring tape, laser clinometer and laser distance measuring device. Where site constraints prevent the use of a measuring device the measurement is estimated and is suffixed with a '#' symbol in the tree survey schedule.

Root protection areas

Below ground constraints or Root Protection Areas (**RPAs**) for all trees included in the site survey are calculated in accordance with *BS5837:2012 4.6.1*. The RPA is a layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability, and where the protection of the roots and soil structure should be treated as a priority, the RPA does not represent the entire root system of a tree.

The RPAs are plotted onto the associated plans as a circle centred on the base of each tree stem with a radius of 12 times the trees stem diameter measured at 1.5 metres above ground level. For tree groups the largest stem diameter in the group is used to set the RPA.

If deemed appropriate by the arboricultural surveyor the individual stem diameters of trees within a group may be taken in order to set an accurate group RPA boundary whilst still recording all trees within the group as a single group record.

BS5837:2012 4.6.2 requires that where pre-existing site conditions or other factors indicate that rooting has occurred asymmetrically the RPA should be modified to produce a polygon of an equivalent area. Any trees on site identified as requiring a modification to their RPA are indicated within the AIA.